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Ex.no:12

WORKING WITH CURSOR,PROCEDURES AND FUNCTION

Program 1

FACTORIAL OF A NUMBER USING FUNCTION

CREATE OR REPLACE FUNCTION itfact (a NUMBER) RETURN

NUMBER IS fact NUMBER := 1; b NUMBER;

BEGIN

b := a;

WHILE b > 0

LOOP fact :=

fact * b; b := b -

1;

END LOOP;

RETURN fact;

END;

/

Function created.

DECLARE result NUMBER;

BEGIN

result := itfact(7); -- Call the function with 7 as input

DBMS_OUTPUT.PUT_LINE('The factorial of 7 is ' || result);

END;

/

The factorial of 7 is 5040

Statement processed.

Program 2

Write a PL/SQL program using Procedures IN,INOUT,OUT parameters to retrieve the corresponding book information in library

-- Create a simple table for the library books

```
CREATE TABLE library (  
  book_id INT PRIMARY KEY,  
  book_name VARCHAR2(100),  
  author_name  
  VARCHAR2(100)  
);
```

-- Sample data insertion

```
INSERT INTO library VALUES (1, 'Introduction to PL/SQL', 'John Doe');
```

```
INSERT INTO library VALUES (2, 'Advanced SQL', 'Jane Smith');
```

-- Procedure to retrieve book information

```
CREATE OR REPLACE PROCEDURE get_book_info  
  ( p_book_id IN INT, p_book_name IN OUT  
    VARCHAR2, p_author_name OUT VARCHAR2  
  ) IS
```

```
BEGIN
```

-- Retrieve book information based on the book_id

```
SELECT book_name, author_name  
INTO p_book_name, p_author_name  
FROM library  
WHERE book_id = p_book_id;
```

-- Modify book_name if needed (optional, based on INOUT)

```
p_book_name := p_book_name || ' - Updated'; END;  
/
```

-- Test the procedure

```
DECLARE v_book_name  
  VARCHAR2(100);  
  v_author_name  
  VARCHAR2(100);
```

```
BEGIN
```

v_book_name := 'Sample Book'; -- Initial value

```
get_book_info(1, v_book_name, v_author_name); -- Fetch book info for ID 1
DBMS_OUTPUT.PUT_LINE('Book Name: ' || v_book_name); -- Output modified book
name
DBMS_OUTPUT.PUT_LINE('Author Name: ' || v_author_name); -- Output author
name END;
```

/

Book Name: Introduction to PL/SQL - Updated
Author Name: John Doe

Statement processed.